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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/687,007	10/13/2000	Richard A. Bramley JR.	00-1010	1372

7590

03/10/2004

Loren H. McRoss
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EXAMINER

BONURA, TIMOTHY M

ART UNIT	PAPER NUMBER
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2114

DATE MAILED: 03/10/2004

7

Please find below and/or attached an Office communication concerning this application or proceeding.

8

Office Action Summary

Application No.

09/687,007

Applicant(s)

BRAMLEY, RICHARD A.

Examiner

Tim Bonura

Art Unit

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 10 December 2003.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-14 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-14 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 13 October 2000 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- 1) ☐ Certified copies of the priority documents have been received.
 - 2) ☐ Certified copies of the priority documents have been received in Application No. _____.
 - 3) ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.



NADEEM IQBAL
PRIMARY EXAMINER

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

DETAILED ACTION

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. Claims 1-5, and 9-11 rejected under 35 U.S.C. 102(b) as being unpatentable by Scheive, et al, U.S. Patent Number 5,398,333. Regarding claim 1:

- a. Regarding the limitation of modifying the EFI to include an EFI driver that operates to configure available flash ROM space normally reserved for the BIOS as a diagnostic disk drive, Scheive discloses a system with means to have a diagnostic routine embedded in memory that resides in non-volatile memory. (Lines 8-12 of Column 3). Scheive goes on to say that the volatile memory is preferable an erasable programmable ROM (flash ROM). (Lines 60-64 of Column 3).

- b. Regarding the limitation of storing the EFI and the EFI driver in the memory, Scheive discloses the diagnostic routine is compressed and stored in a memory subsystem that comprises ROM, system RAM and flash ROM. (Lines 10-13 of Column 5).

- c. Regarding the limitation of upon initializing the computer system, configuring the space in memory for a diagnostic disk drive, Scheive discloses a system that after a boot routine occurs, a load of the diagnostic routine into the memory occurs. (Lines 14-16 of Column 3).

- d. Regarding the limitation of loading one or more diagnostic programs into the diagnostic disk drive, Scheive discloses a system with means to decompress a driver routine

providing an environment in lieu of an operating system of the computer system within which to execute the diagnostic routine. (Lines 19-24 of Column 3).

e. Regarding the limitation of selectively booting the computer system to the EFI command shell in the event of a problem, Scheive discloses a system that will boot to the diagnostic routine upon completing a boot routine. (Lines 26-33 of Column 3). The diagnostic routine will be bypassed if the system determines that a timer expires. (Lines 35-37 of Column 5).

f. Regarding the limitation of running diagnostic programs to correct problems, Scheive discloses a diagnostic program to find errors in a system at boot time. (Lines 15-17 of Column 6).

g. Regarding the limitation of rebooting the system using the operating system on the hard disk drive, the system of Scheive discloses that a system start normal operation after or in lieu of testing. (Lines 35-37 of Column 5). The examiner has concluded that normal operation would entail starting of an operating system since the diagnostic system is said to be embodied on a person computer. (Lines 8-17 of Column 7).

3. Regarding claim 2, Scheive discloses a system with means to have an operating system stored in memory. It is inherent that the operating system is software. Please also see 112 2nd paragraph rejections below.

4. Regarding claim 3, Scheive discloses a system wherein the diagnostic routine is stored in flash ROM that is firmware. (Lines 60-64 of Column 3). Please also see 112 2nd paragraph rejections below.

5. Regarding claim 4, Scheive discloses a system with means to displays diagnostic routine events using a visual interface. (Lines 52-54 of Column 3).

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6. Regarding claim 5, Scheive disclose a system with means with compression and decompression means to store the data in the memory. (Lines 26-33 of Column 3).
7. Regarding claim 9,
 - h. Regarding the limitation of a CPU, Scheive discloses a system with a processor. (Lines 59 of Column 4).
 - i. Regarding the limitation of a nonvolatile RAM, Scheive discloses a system with RAM. (Lines 10-13 of Column 5).
 - j. Regarding the limitation of the EFI, Scheive discloses a system with means to have a diagnostic routine embedded in memory that resides in non-volatile memory. (Lines 8-12 of Column 3).
 - k. Regarding the limitation of BIOS, Scheive discloses a system with BIOS that is stored in flash ROM, which is a type of non-volatile RAM. (Lines 56-59 of Column 5).
 - l. Regarding the limitation of storing the EFI and the EFI driver in the memory, Scheive discloses the diagnostic routine is compressed and stored in a memory subsystem that comprises ROM, system RAM and flash ROM. (Lines 10-13 of Column 5).
 - m. Regarding the limitation of upon initializing the computer system, configuring the space in memory for a diagnostic disk drive, Scheive discloses a system that after a boot routine occurs, a load of the diagnostic routine into the memory occurs. (Lines 14-16 of Column 3).
 - n. Regarding the limitation of loading one or more diagnostic programs into the diagnostic disk drive, Scheive discloses a system with means to decompress a driver routine providing an environment in lieu of an operating system of the computer system within which to execute the diagnostic routine. (Lines 19-24 of Column 3).

- o. Regarding the limitation of selectively booting the computer system to the EFI command shell in the event of a problem, Scheive discloses a system that will boot to the diagnostic routine upon completing a boot routine. (Lines 26-33 of Column 3). The diagnostic routine will be bypassed if the system determines that a timer expires. (Lines 35-37 of Column 5).
 - p. Regarding the limitation of running diagnostic programs to correct problems, Scheive discloses a diagnostic program to find errors in a system at boot time. (Lines 15-17 of Column 6).
 - q. Regarding the limitation of rebooting the system using the operating system on the hard disk drive, the system of Scheive discloses that a system start normal operation after or in lieu of testing. (Lines 35-37 of Column 5). The examiner has concluded that normal operation would entail starting of an operating system since the diagnostic system is said to be embodied on a person computer. (Lines 8-17 of Column 7).
8. Regarding claim 10, Scheive discloses a system with means to displays diagnostic routine events using a visual interface. (Lines 52-54 of Column 3).
9. Regarding claim 11, Scheive disclose a system with means with compression and decompression means to store the data in the memory. (Lines 26-33 of Column 3).

Claim Rejections - 35 USC § 103

10. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

11. Claims 6 and 12 are rejected under 35 U.S.C. 103(a) as being unpatentable over Scheive as applied to claim 1 or 9 above, and further in view of Davis, U.S. Patent Number 5,844,986.

Regarding claim 6, Scheive discloses a system with a diagnostic routine for test devices in a computer system prior to initializing the operating system. Scheive does not disclose a system wherein the EFI driver contains encryption routines. Davis discloses a system with BIOS that contains encryption. (Lines 58-63 of Column 2). It would have been obvious to one of ordinary skill in the art at the time of the invention to included means to encrypt BIOS into a diagnostic routine for testing devices before a boot of an operating system because; it would prevent corruption of BIOS and thereby prevent any modification without permission. (Lines 63-67 of Column 1 of Davis).

12. Regarding claim 12, Scheive discloses a system with a diagnostic routine for test devices in a computer system prior to initializing the operating system. Scheive does not disclose a system wherein the EFI driver contains encryption routines. Davis discloses a system with BIOS that contains encryption. (Lines 58-63 of Column 2). It would have been obvious to one of ordinary skill in the art at the time of the invention to included means to encrypt BIOS into a diagnostic routine for testing devices before a boot of an operating system because; Davis would prevent corruption of BIOS, through encryption, which would result in preventing any modification without permission. (Lines 63-67 of Column 1 of Davis).

13. Claims 7, 8, 13, and 14 rejected under 35 U.S.C. 103(a) as being unpatentable over Scheive as applied to claims 1 or 9 above, and further in view of Treu, U.S. Patent Number 5,245,615.

Regarding claim 7, Scheive discloses a system with a diagnostic routine for test devices in a computer system prior to initializing the operating system. Scheive does not disclose a system wherein the diagnostic disk drive space is used to store POST error logs that may be read and displayed. Treu disclose a system that can store and read error logs. (Lines 15-25 of Column 4).

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Scheive, as disclosed above in claim 4, can displays errors to a user via an interface. It would have been obvious to on of ordinary skill in the art at the time of the invention to incorporate the error logging of Treu with the diagnostic routine for testing of Scheive. Scheive discloses that the diagnostic routine disclosed is more thorough than a standard POST. (Lines 11-15 of Column 6).

Scheive also discloses that the POST occurs upon a reboot of the computer. (Lines 65-66 of Column 4). One of ordinary skill would understand that the POST error log must be stored and be able to be read if the POST occurs.

14. Regarding claim 8, Treu discloses a system wherein the POST log data can be read by the operating system during the boot process. (Lines 16-22 or Column 7).

15. Regarding claim 13, Scheive discloses a system with a diagnostic routine for test devices in a computer system prior to initializing the operating system. Scheive does not disclose a system wherein the diagnostic disk drive space is used to store POST error logs that may be read and displayed. Treu disclose a system that can store and read error logs. (Lines 15-25 of Column 4).

Scheive, as disclosed above in claim 10, can displays errors to a user via an interface. It would have been obvious to on of ordinary skill in the art at the time of the invention to incorporate the error logging of Treu with the diagnostic routine for testing of Scheive. Scheive discloses that the diagnostic routine disclosed is more thorough than a standard POST. (Lines 11-15 of Column 6).

Scheive also discloses that the POST occurs upon a reboot of the computer. (Lines 65-66 of Column 4). One of ordinary skill would understand that the POST error log must be stored and be able to be read if the POST occurs.

16. Regarding claim 14, Treu discloses a system wherein the POST log data can be read by the operating system during the boot process. (Lines 16-22 or Column 7).

Claim Rejections - 35 USC § 112

17. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter that the applicant regards as his invention.

18. Claim 1 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

19. Claim 1 recites the limitation "flash memory" in 3rd limitation of the claim. There is insufficient antecedent basis for this limitation in the claim.

Response to Arguments

20. Applicant's arguments filed 12/31/2003 have been fully considered but they are not persuasive.

21. The objections to claims 1 and 12 are removed.

22. The amended claims 2 and 3 are noted and rejections under 35 USC 112 2nd paragraph are hereby removed.

23. Regarding the arguments for claim 1-5 and claims 9-11, the applicant argues that "the instant invention uses the otherwise non-used diagnostic or other suitable programs are maintained and executed when the larger system for which the nonvolatile memory forms a part is not functioning properly or when diagnostic operations need to be performed." (1st full paragraph of page 7 of paper number 4). In response to applicant's argument that the references fail to show certain features of applicant's invention, it is noted that the features upon which applicant relies (i.e., using the otherwise non-used diagnostic or other suitable programs are

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maintained and executed when the larger system for which the nonvolatile memory forms a part is not functioning properly or when diagnostic operations need to be performed) are not recited in the rejected claim(s). Although the claims are interpreted in light of the specification, limitations from the specification are not read into the claims. See *In re Van Geuns*, 988 F.2d 1181, 26 USPQ2d 1057 (Fed. Cir. 1993).

24. Regarding the argument for claim 1 that Schieve does not disclose, “loading one or more diagnostic program into the diagnostic drive” The applicant states the Schieve teaches storing a diagnostic routines in separate video RAM whereas the application and where the diagnostic programs of Schieve are stored in separate memory. (2nd full paragraph of page 7 or paper 4). The applicant recites a passage in Schieve (Lines 18-20 of Column 6) that shows this argument. The examiner contends the next line covers the claimed limitation of the applicant because Schieve discloses, “the diagnostic routines could be stored in system RAM” (Lines 20-21 of Column 6).

25. Regarding the argument for claim 1 that Schieve does not disclose steps of “configure available nonvolatile random access memory space normally used for the BIOS as a diagnostic disk drive” (Last paragraph, Lines 2-3 of Page 7 of pager 4) and the argument of not disclosing the Schieve “loaded and subsequently executed from the diagnostic disc drive portion of the flash memory or space normally reserved for the BIOS” (Lines 2-4 of Page 8 of pager 4). The examiner contended that Schieve does disclose this step. (Lines 4-8 of Column 4). The examiner also contends that Schieve covers this limitation with by stating, “the diagnostic routines could be stored in system RAM” (Lines 20-21 of Column 6).

26. Regarding the argument for claim 1 of Schieve not disclosing, “configuring is not required in the multi-memory use system disclosed in Scheive.” (1st full paragraph of page 8 of paper 4). The examiner would first contend that the amendments by the applicant have led to 112 issues (see above).). The examiner also contends that Schieve covers this limitation with by stating, “the diagnostic routines could be stored in system RAM” (Lines 20-21 of Column 6).

27. Regarding the argument for claim 9 that Schieve teaches storing diagnostic routines in separate video RAM whereas the application and where the diagnostic programs of Schieve are stored in separate memory. (1st paragraph of page 9 or paper 4). The applicant recites a passage in Schieve (Lines 18-20 of Column 6) that shows this argument. The examiner contends the next line covers the claimed limitation of the applicant because Schieve discloses, “the diagnostic routines could be stored in system RAM” (Lines 20-21 of Column 6).

28. Regarding all argument of claims 7-8 and 13-14, the applicant restates the same arguments listed above for claims 1 and 9. The examiner contends the above responds cover the arguments for the dependant claims 7-8 and 13-14. The applicant does state that neither Schieve and/or Treu “teach or suggest the limitation defined in claim 8.” (1st full paragraph of page 11 of paper 4). However no argument is given to support this assertion. Thereby the above rejections are maintained.

Conclusion

29. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the mailing date of this final action.

30. Any inquiry concerning this communication or earlier communications from the examiner should be directed to **Tim Bonura**.

- The examiner can normally be reached on **Mon-Fri: 7:30-5:00, every other Friday off**. The examiner can be reached at: **703-305-7762**.

31. If attempts to reach the examiner by telephone are unsuccessful, please contact the examiner's supervisor, **Rob Beausoliel**.

- The supervisor can be reached on **703-305-9713**.

32. The fax phone numbers for the organization where this application or proceeding is assigned are:

- **703-872-9306 for all patent related correspondence by FAX**.

33. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR

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system, see <http://pair-direct.uspto.gov/>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

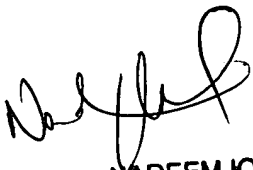
34. Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the **receptionist** whose telephone number is: **703-305-3900**.

35. Responses should be mailed to:

o **Commissioner of Patents and Trademarks**

P.O. Box 1450

Alexandria, VA 22313-1450



NADEEM IQBAL
PRIMARY EXAMINER

tmb
March 7, 2004

Tim Bonura
Examiner
Art Unit 2114